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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,903

08/16/2005

Michael Broderick

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EXAMINER

MCCALISTER, WILLIAM M

ART UNIT

PAPER NUMBER

4156

MAIL DATE

DELIVERY MODE

01/31/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/541,903	<b>Applicant(s)</b> BRODERICK, MICHAEL	
	<b>Examiner</b> WILLIAM M. MCCALISTER	<b>Art Unit</b> 4156	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 19-29 and 38 is/are pending in the application.
- 4a) Of the above claim(s) 30-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-29 and 38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/12/2005</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of claims 19-29 and 38 in the reply filed on 29 November, 2007 is acknowledged.

Claims 30-38 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 29 November, 2007.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 24 recites the limitation "valve member" in line 1. There is insufficient antecedent basis for this limitation in the claim. For purposes of this office action, Examiner will assume Applicant uses this phrase to refer to the "closure member".

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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2. Claims 19-21, 23, 27-29 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by McDonald (US Patent 4,023,355).

With regard to claim 19, McDonald discloses a valve for enabling release of pressurized steam (McDonald's disclosure contains nothing to suggest that his device is incapable of handling steam) from a pressure vessel, the valve comprising a displaceable closure member 23 which, in its closed disposition, is maintained in said closed disposition by exposure to the pressure of the steam within the pressure vessel (pressure of steam as indicated by arrows in the figure below would tend to maintain the valve member in the closed position), and the closure member being displaceable from said closed disposition to an open disposition against the pressure of the steam within the pressure vessel (as depicted in the figure below) for said release of pressurized steam from the pressure vessel (see column line 65 to column 3 line 6, describing the flow of fluid through the orifices).

With regard to claim 20, McDonald discloses his valve, wherein, in a charged condition of the pressure vessel 6, the pressure of the steam within the pressure vessel is active to hold the valve in said closed disposition (pressure of fluid as indicated by arrows in the figure below would tend to act to hold the valve member in the closed position).

With regard to claim 21, McDonald discloses the closure member to be displaceable between said closed disposition and an open disposition by a double-acting actuator 18 (see column 2 lines 31-32, in light of the figure).

With regard to claim 23, McDonald discloses the closure member to be mounted at one axial end of a spindle 22 extending between the closure member and said actuator.

With regard to claim 27, McDonald discloses the closure member to be mounted for substantially vertical displacement between said closed disposition and an open disposition thereof.

With regard to claim 28, McDonald discloses the nominal flange size of the valve body at the steam exit side to be substantially greater than the nominal flange size of the valve body at the steam entry side (see close-up of the figure, *infra*).

With regard to claim 29, McDonald discloses a product treatment system comprising a valve for enabling release of pressurized steam (McDonald's valve channels a stream of high temperature, high pressure gas, and its disclosure contains nothing to suggest it is incapable of handling steam) from a pressure vessel 6, the valve comprising a displaceable closure member 23 which, in its closed disposition, is maintained in said closed disposition by exposure to the pressure of the steam within the pressure vessel (pressure of steam as indicated by arrows in the figure below would tend to maintain the

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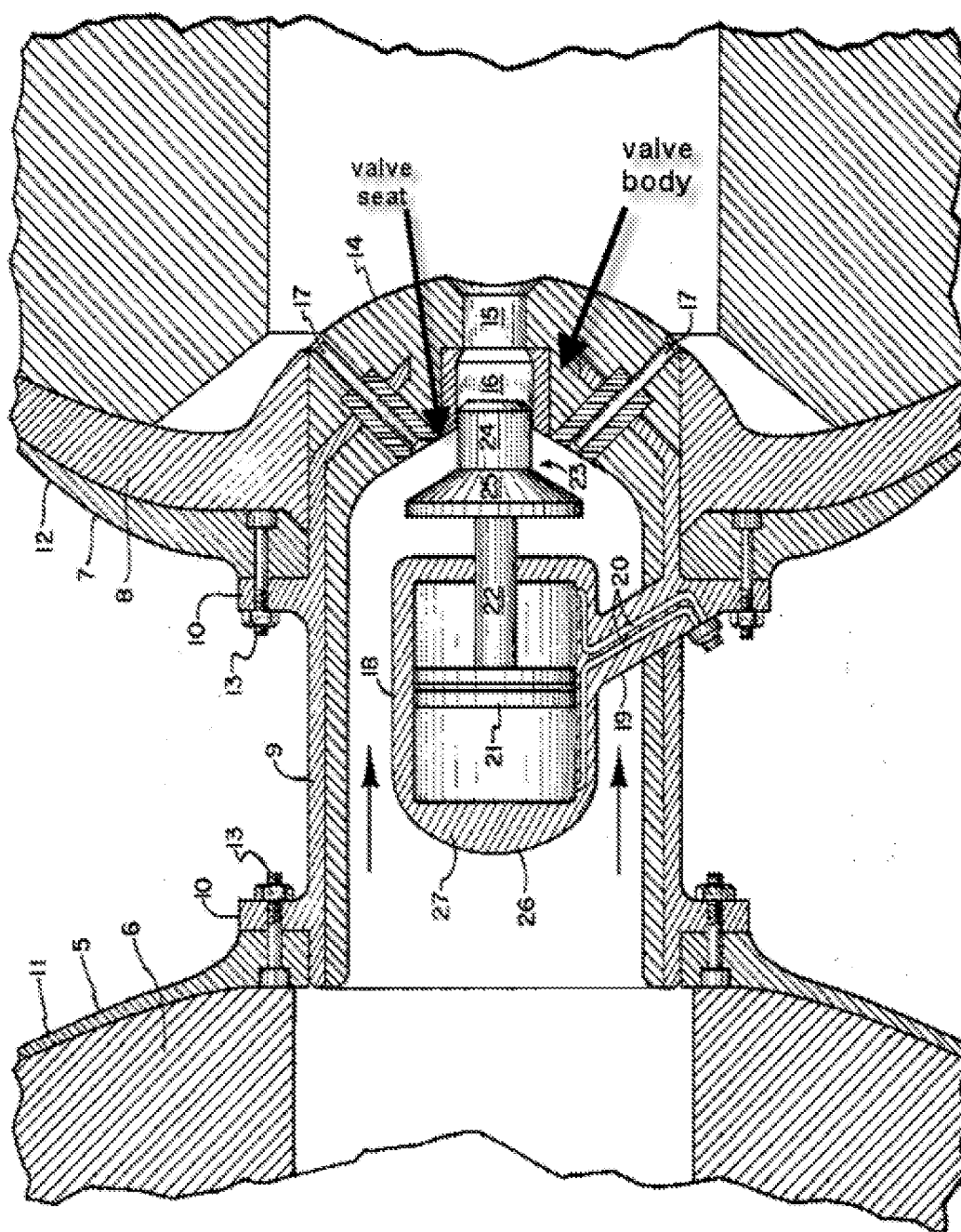
valve member in the closed position), and the closure member being displaceable from said closed disposition to an open disposition against the pressure of the steam within the pressure vessel for said release of pressurized steam from the pressure vessel (as depicted in the figure below), wherein the valve is mounted for release of pressurized steam into an expansion region (see close-up of the figure, *infra*) substantially at the point of entry of steam into said expansion region.

With regard to claim 38, McDonald discloses a valve for enabling release of pressurized steam (McDonald's valve channels a stream of high temperature, high pressure gas, and its disclosure contains nothing to suggest it is incapable of handling steam) from a pressure vessel 6, the valve comprising a displaceable closure member 23 which, in its closed disposition, is maintained in said closed disposition by exposure to the pressure of the steam within the pressure vessel (pressure of steam as indicated by arrows in the figure below would tend to maintain the valve member in the closed position), and the closure member being displaceable from said closed disposition to an open disposition against the pressure of the steam within the pressure vessel for said release of pressurized steam from the pressure vessel (as depicted in the figure below), wherein the nominal flange size of the valve body at the steam exit side is substantially greater than the nominal flange size of the valve body at the steam entry side (see close-up of the figure, *infra*).

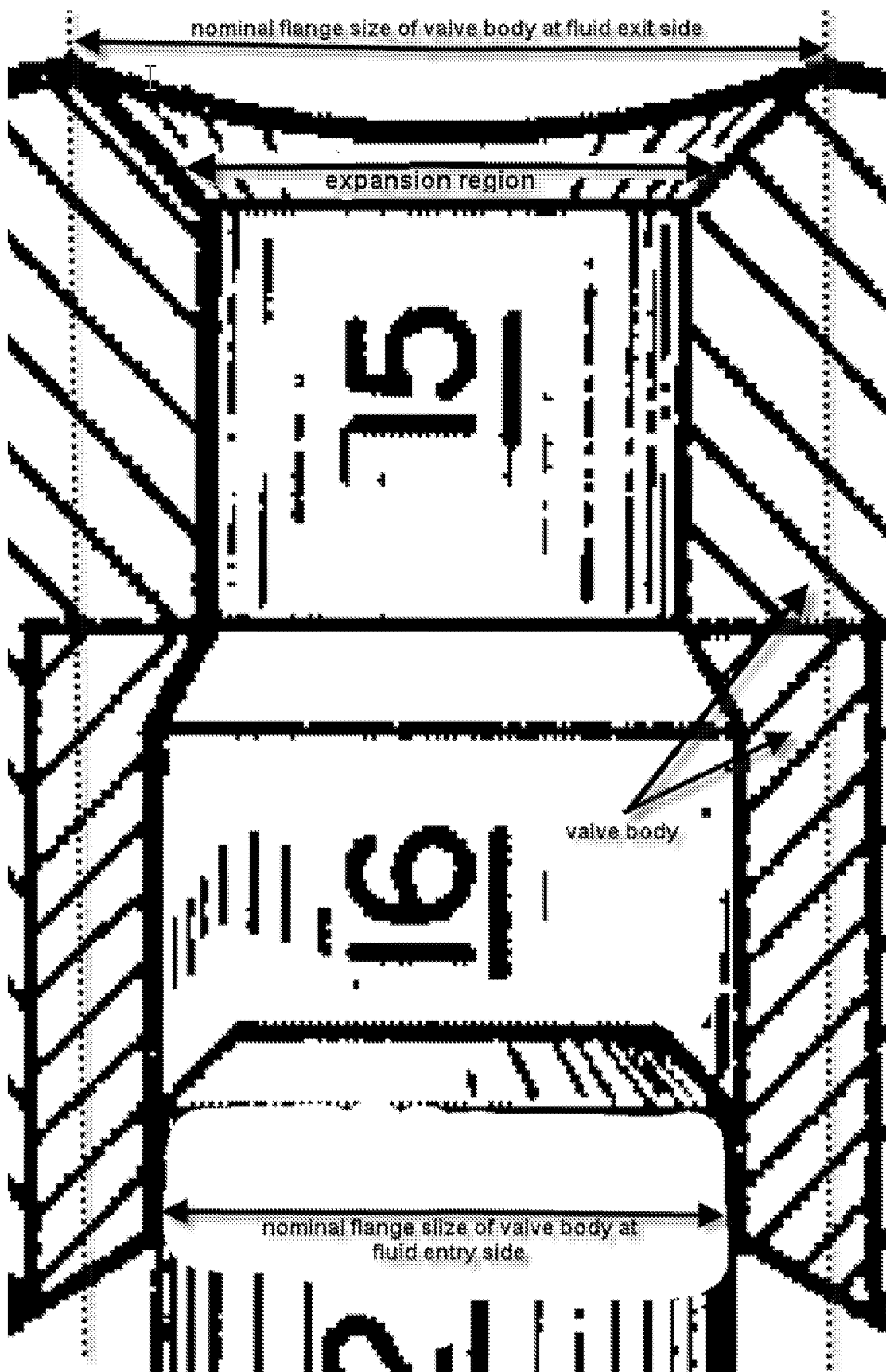
**U.S. Patent**

May 17, 1977

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***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald.

With regard to claim 22, McDonald discloses every limitation of claim 21, but does not disclose the piston/cylinder actuator to be driven by air. However, in order to minimize the problem of unnecessary weight, one of ordinary skill in the art at the time of invention would have chosen air, from among the finite number of lightweight options, to use as the motive fluid, with a reasonable expectation of it successfully actuating the piston and valve.

With regard to claim 24, McDonald discloses every limitation of claim 21, and the figure shows an absence of a sealing element between the closure member and the valve seat, but it does not disclose the closure member to be mounted for substantially metal-to-metal contact with a valve seat portion. However, to minimize the risk of failure, one of ordinary skill in the art at the time of invention would have chose metal, from among the finite number of high-melting point substances, from which to form the valve

member and valve seat, with a reasonable expectation of them withstanding the high pressures and temperatures associated with the environment.

5. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald as applied to claim 19 above, and further in view of Tartaglia (US Patent 5,078,177).

McDonald discloses every limitation of claim 19, and a face portion 25 of the valve member, but does not disclose this face portion to be interchangeably secured to the remainder of the closure member. However, Tartaglia teaches a similar valve wherein the face portion of the valve member is interchangeably secured to the remainder of the closure member (see column 3 lines 44-51). To allow greater flexibility in the use of McDonald's valve, one of ordinary skill in the art at the time of invention would have (in combination with the adaptation discussed in the obviousness analysis of claim 26, *infra*) modified the valve face to be interchangeable with a valve face of a different size, to predictably obtain a valve wherein the flow characteristics therethrough can be altered to meet the particular specifications of the system into which the valve is placed.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald as applied to claim 19 above, and further in view of Walker (US Patent 3,658,092).

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McDonald discloses every limitation of claim 19, and a seat portion (see annotated figure, supra) and face portion 25. McDonald does not disclose the seat portion being interchangeably secured to the valve body portion in the seat region. However, Walker teaches a similar valve which uses interchangeable seat portions (see column 2 lines 62-64). To allow greater flexibility in the use of McDonald's valve, one of ordinary skill in the art at the time of invention would have (in combination with the adaptation discussed in the obviousness analysis of claim 25, supra) modified the valve seat to be interchangeable with a valve seat of a different size, to predictably obtain a valve wherein the flow characteristics therethrough can be altered to meet the particular specifications of the system into which the valve is placed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM M. MCCALISTER whose telephone number is (571)270-1869. The examiner can normally be reached on M-F, alt. Fridays off, hours 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Isabella can be reached on (571) 272-4749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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WMM  
1/14/07

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